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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/614,187 | 07/11/2000 | COLIN BELL | 102689-28 | 1624 |
| 21125 | 7590 | 01/15/2004 | | |
| NUTTER MCCLENNEN & FISH LLP WORLD TRADE CENTER WEST 155 SEAPORT BOULEVARD BOSTON, MA 02210-2604 | | | | |
| | | | EXAMINER HO, DUC CHI | |
| | | | ART UNIT 2665 | PAPER NUMBER 6 |

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/614,187

Applicant(s)

BELL ET AL.

Examiner

Duc C Ho

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-22 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 8, 23-27 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2&3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 7-8, 23-26, 27, and 33 are rejected under 35 U.S.C. 102(b) s being anticipated by Lovelace et al. (US 5,901,136), hereinafter referred as Lovelace.

Regarding claim 1, Lovelace discloses a method for controlling timing in a distributed digital cross-connect system.

a central switch fabric subsystem (a unit 13, fig. 1, see column 3-line 43 to column 4-line 6) including at least one local switch fabric timing subsystem (a unit A, fig. 1, see column 4, lines 60-67. The unit A inherently represents a timing unit A of the timing subsystem 16-fig. 1);

a distributed switch fabric subsystem (a unit 18, fig. 1, see column 3-line 43 to column 4-line 33) coupled to the central switch fabric subsystem and including at least one local switch fabric timing subsystem (a unit AA-18 inherently represents a timing unit of the timing subsystem 16-fig. 1, see column 5, lines 1-9); and

a distributed switch fabric timing subsystem (the timing subsystem 16-fig. 1, see column 4-line 60 to column 5-line 9) for providing a reference signal (a timing signal,

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i.e., the timing media signal 26, fig. 1) *to each of the local switch fabric timing subsystems.*

Regarding claim 2, the timing media signal 26 is a timing signal obtained from the timing subsystem 16-fig. 1.

Regarding claim 3, the timing signal of the timing subsystem 16 inherently comprises a start for a timing media signal 26.

Regarding claim 7, the timing subsystem 16-fig. 1 may be centrally located and coupled to the unit 13-fig. 1. In other words, it can be located on the same printed circuit board with the unit 13-fig. 1, see column 4, lines 60-67.

Regarding claim 8, please see the rejection of claim 7. The timing subsystem 16-fig. 1 may not be centrally located and coupled to the unit 13 as a design choice.

Regarding claim 23, Lovelace discloses a method for controlling timing in a distributed digital cross-connect system.

a switch fabric subsystem (a unit 18, fig. 1, see column 3-line 43 to column 4-line 33) *including at least one local switch fabric timing subsystem* (a unit AA-18 inherently represents a timing unit of the timing subsystem 16-fig. 1, see column 5, lines 1-9); *and*

a central switch fabric timing subsystem (the timing subsystem 16-fig.1 is coupled to the unit AA-18 via the timing media 16-fig. 1, see column 4-line 60 to column 5-line 9) *coupled with the local switch fabric timing subsystem for providing a reference signal (a timing signal) to the local switch fabric timing subsystem, wherein the reference signal is a segment demarcation signal (the timing signal).*

Regarding claim 24, the timing signal of the timing subsystem 16-fig. 1 inherently comprises a start for a timing media signal 26.

Regarding claim 25, the unit 18 is a switch, and it inherently comprises a central switch subsystem to switch data from the inputs to the outputs, see column 5, lines 19-29.

Regarding claim 26, the unit 13-fig. 1 is considered as a distributed switch subsystem to couple with the central switch subsystem of the unit 18.

Regarding claim 27, Lovelace discloses a method for controlling timing in a distributed digital cross-connect system.

Providing a reference signal (a timing signal media 26, fig. 1, see column 3, lines 43-61) from a central switch fabric timing subsystem (a timing subsystem 16-fig.1, see column 4-line 60 to column 5-line 9);

synchronizing a first local switch fabric timing subsystem (a unit A, fig. 1, see column 4, lines 60-67. The unit A inherently represents a timing unit A of the timing subsystem 16-fig. 1) coupled with a central switch fabric subsystem (a unit 13, fig. 1, see column 3-line 43 to column 4-line 6. The unit 13 is inherently synchronized to the timing subsystem 16 via a timing signal) to the reference signal;

synchronizing a second local switch fabric timing subsystem (a unit AA-18, fig. 1 represents a timing unit) coupled with a distributed switch fabric subsystem (a unit 18-fig. 1. The unit 18 is inherently synchronized with the timing unit AA-18, wherein the timing signal of the unit AA is obtained from the timing subsystem 16, fig. 1 via the timing media signal 26) to the reference signal;

transferring network data between the central switch fabric subsystem and the distributed switch fabric subsystem in accordance with the reference signal (the digitally encoded telecommunications data is inherently transferred between the unit 13 and 18, in accordance with the timing signal of the timing subsystem 16, see fig.1, and column 5-line 66 to column 6-line 31).

Regarding claim 33, in Lovelace a timing unit 18-BA, fig. 1 is considered as a third local timing subsystem, which provides a synchronized timing signal to a second switch 18 DSNB, fig. 1 via the timing media signal 26, wherein the unit 13 is inherently capable of transferring data between itself and the switch units 18 DSNA-B in accordance with the timing signal media 26.

Allowable Subject Matter

3. Claims 9-22 are allowed.
4. Claims 4-6, and 28-32 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reason for allowance

5. Regarding claims 9-22, the prior art fails to teach or suggest a network device which comprises a second central switch fabric timing subsystem providing a plurality of second timing reference signals and at least one second master control signal, wherein one of the second timing reference signals is provided to each of the local switch fabric timing subsystems, in combination with other limitations, as specified in the independent claim 9.

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Elliot et al. (US 6,587,470) is cited to show a network device with a distributed switch fabric timing system, which is considered pertinent to the claimed invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (703) 305-1332. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4750

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703)- 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington. VA, Sixth Floor (Receptionist).

Patent Examiner

Duc Ho

01-09-04

